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Gravitomagnetic Acceleration of Black Hole Accretion Disk Matter to Polar Jets JOHN POIRIER, GRANT MATHEWS, University of Notre Dame — It is shown that the motion of the neutral masses in an accretion disk orbiting a black hole creates a magnetic-like (gravitomagnetic) field that vertically accelerates neutral particles near the accretion disk away from the disk and then inward toward the axis of the accretion disk. Moreover, as the accelerated material nears the axis, a frame-dragging effect twists the trajectories around the axis thus contributing to the formation of a narrow polar jet emanating from the poles.

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